

We Claim:

1. A method for retransmitting information in a communication channel of a wireless communication system, the communication channel including a plurality of fixed length frames each divided into a plurality of time slots of equal duration, the method comprising:
 - 5 transmitting a code multiplexed retransmission of a previous transmission within one of the fixed length frames using one or more of a plurality of codes, wherein the number of codes used for the retransmission is variable based on the condition of the communication channel.
 - 10 2. The method according to claim 1, wherein redundancy contained within the retransmission is a function of the number of codes used for the transmission.
 - 15 3. The method according to claim 1, wherein the condition of the communication channel is determined by at least one of the factors selected from the group consisting of quality-based parameters and available resources within the communication channel.
 - 20 4. The method according to claim 1, wherein each of the fixed length frames is capable of transmitting a combination of one or more signal transmissions selected from the group consisting of new transmissions and retransmissions of previous transmissions.
 - 25 5. The method according to claim 1, wherein the number of codes is the same for a first transmission and a subsequent corresponding retransmission of the first transmission.
 - 30 6. The method according to claim 1, wherein the number of codes used for a first transmission is different than the number of codes used for a subsequent corresponding retransmission of the first transmission.
 7. The method according to claim 1, wherein a fixed length frame is capable of carrying multiple simultaneous transmissions by using one or more different codes for each of the multiple simultaneous transmissions.

8. The method according to claim 7, wherein the multiple simultaneous transmissions include a plurality of first transmissions from different users.

9. The method according to claim 7, wherein the multiple simultaneous transmissions include a plurality of retransmissions of previous transmissions from different users.

10. The method according to claim 7, wherein the multiple simultaneous transmissions include a plurality of retransmissions of previous transmissions from the same user.

11. The method according to claim 7, wherein the multiple simultaneous transmissions include first transmission and one or more retransmissions from the same user

15 12. The method according to claim 7, wherein the multiple simultaneous transmissions include one or more first transmissions from one or more users and one or more retransmissions of previous transmissions from the one or more users.

20 13. The method according to claim 1, wherein the fixed length frames have a duration of 2 milliseconds and each of the plurality of time slots has a duration of .67 milliseconds.

25 14. A method for providing adaptive incremental redundancy in a communication channel of a wireless communication system, the communication channel including a plurality of fixed length frames, the method comprising:

in a fixed length frame, sending a fixed duration retransmission of a previous transmission in a domain selected from the group consisting of a code domain, a frequency domain, and a space domain,

30 wherein the number of resources selected from the group consisting of codes, frequencies, and antennas that are used for the retransmission is variable.

35 15. A method for providing adaptive incremental redundancy in a communication channel of a wireless communication system, the communication channel including a plurality of fixed length frames, the method comprising:

in a fixed length frame, sending a fixed duration retransmission of a previous transmission in a domain selected from the group consisting of a code domain, a frequency domain, and a space domain,
wherein a transmission format used for the retransmission is variable.

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16. The method according to claim 15, wherein the transmission format in the code domain is defined by parameters including number of codes, modulation, and coding, wherein the transmission format in the frequency domain is defined by parameters including number of frequencies, number of codes, modulation, and coding, and wherein the transmission format in the space domain is defined by parameters including number of antennas, number of codes, modulation, and coding.

17. A method for providing adaptive incremental redundancy in a communication channel of a wireless communication system, the communication channel including a plurality of fixed length frames, the method comprising:

in a fixed length frame, sending a fixed duration retransmission of a previous transmission in the code domain,

wherein a transmission format used for the retransmission is variable.

18. The method according to claim 17, wherein the transmission format is defined by parameters including number of codes, modulation, and coding.

19. The method according to claim 18, wherein the transmission format is varied by changing one or more of the parameters.

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20. The method according to claim 7, further comprising the step of transmitting a multi-level acknowledgement/negative acknowledgement (ACK/NACK) in response to multiple transmissions that occur in the same frame for the same user.